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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re : Llinas-Brunet et al.
Patent No. : 6,323,180 B1
Dated : Nov. 27, 2001
Inventors : Llinas-Brunet, M., et al
For : Hepatitis C Inhibitor Tri-Peptides
Docket No. : 13/068

Certificate
SEP 02 2003
of Correction

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CERTIFICATE OF CORRECTION

Sir:

The undersigned attorney for both the patentees and the assignee of the above-captioned patent hereby requests that a certificate of correction be issued for the above-captioned patent, under 35 U.S.C. § 255 and 37 CFR § 1.323. The required fee for this request as specified in 37 CFR 1.20(a) is paid by the Fee Transmittal form filed herewith.

I. Corrections

A Certificate Of Correction (Form PTO/SB/44), showing the requested corrections is enclosed herewith. The Examiner's attention is directed to Form PTO/SB/44 for a detailed listing of the requested corrections.

II. Remarks Concerning the Requested Corrections

All the corrections set forth in the attached Certification of Correction Form PTO/SB/44 are of a typographical nature or are mistakes of minor character and

SEP 02 2003

Request for Certificate of Correction
US Patent No. 6,323,180 B1
Attorney Docket No. 13/068

would not constitute new matter or require a reexamination of this issued patent. Accordingly, Applicants respectfully submit that a Certificate of Correction should issue under 35 USC 255. The various corrections are either due to an Office mistake (i.e. printing error on the part of the Office) as is apparent from the specification and/or amendment papers as filed, or are due to Applicant's mistake in the original filing text.

Explanation is provided below for many of the corrections set forth in the Certificate of Correction. Page numbers refer to the original application filing text. Those corrections not explained are readily obvious corrections of a typographical or minor character.

LOCATION	EXPLANATION OF CORRECTION
Pg. 1, Section (75)	Bruno Simoneau is incorrectly listed as an inventor. On July 7, 2000, the Office granted a Petition filed on June 7, 2000 to delete Bruno Simoneau as an inventor. This is an Office mistake.
Col. 9, lines 22-23	The deleted phrase was improperly repeated in the definition (v)
Col. 14, line 67	Replacing B with R ³ is an obvious correction from the context
Col. 20, line 48	This is a typographical error in the designation of the (1S, 2R) distereoisomer of compound 801 having the (1R, 2S) configuration. These types of diastereoisomers are shown at pg. 20, line 12, of the filing text. *
Col. 24, lines 10-11, 19 and 20	The phrase "and R ₅ is H or methyl" is relocated to a more appropriate location at the end of the B = amide group definition

Request for Certificate of Correction
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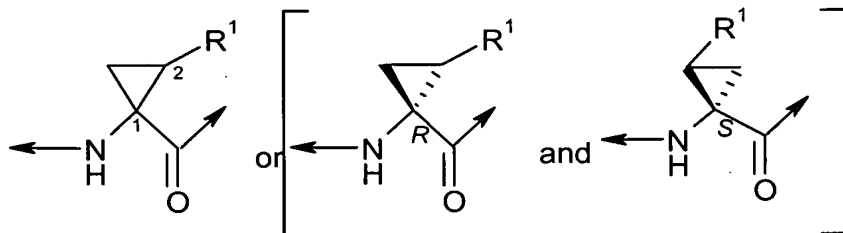
Col. 35, lines 45, 55-56	The first process listed at Col. 35, lines 45-54, is not correct for those compounds where R ²⁰ is aryl or Het. The correct process is the second process identified as such at Col. 35, lines 55 – Col. 36, line 32.
Col. 36, line 10	Office printing error; see pg. 39, Scheme V.
Col. 36, line 45	Office printing error; see pg. 39, Scheme VI
Cols. 48-60	The typographical errors in the designations of certain diastereoisomers of the compounds of formula (I) have been corrected. One skilled in the art would clearly understand that the original designations were erroneous and what the correct designations should be.*
Col. 53, line 25	This mistake in nomenclature is apparent from the structure of compound 12b used as starting material in this process
Col. 56, lines 15-20	The structure appearing at Col. 56, lines 50-55 is relocated to lines 15-20 for clarity
Cols. 67-68	The corrections to compounds 306 and 26d are readily apparent based on the reactant Boc-Chg-OH used in step (c) of the process; Chg is defined in Table A, pg. 7, and Boc at pg. 45, line 12.
Col. 69, last line	The correction to compound 27e is readily apparent based on the reactant BocChgOH used in step (e) of the process. Chg is defined in Table A, pg. 7, and Boc at pg. 45, line 12.
Col. 72, lines 14-29 and 55-65	The corrections to the structures are readily apparent from the structures of compounds 302 and 311 appearing in Table 3 at page 99 of the specification.
Col. 83, lines 25-45	Structure 35n is improperly repeated
Col. 86, lines 21-45	The amine reactant is relocated above the arrow for structural clarity

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Col. 87, lines 45-50	The correction to compound 333 is readily apparent from the structures of this compounds appearing in Table 3, pg. 102
Col. 142, lines 50 and 61	Office printing error; see claim 1 as allowed
Col. 143, lines 45-46	The deleted phrase was improperly repeated in the definition
Col. 149, line 30; Col. 149, line 55; Col. 152, line 25	The deleted structures are improperly repeated in the claims; therefore, one recitation of each is deleted
Col. 149, line 35	The correction to the second structural isomer is supported by and is readily apparent from page 20, line 12 and original claim 39
Col. 163, lines 0-10	The correction to the R^2 group of compound 334 is supported by and is readily apparent from the structure of this compound in Table 3 at page 102
Col. 188, lines 10-15	The correction to the R^2 group of compound 1002 is supported by and is readily apparent from the structure of this compound in Table 10 at page 118

* As clearly indicated at page 20, lines 9-13, of the filing text:

“Hence, the compound of formula I can exist as a racemic mixture of diastereoisomers at carbon 1 but wherein R_1 at carbon 2 is orientated *syn* to the carbonyl at position 1, represented by the radical:



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or the compound of formula I can exist as a racemic mixture of diastereoisomers . . .”

Examples 9 to 14 where R¹ is ethyl: Compound 9e (which is used in subsequent examples 10-14) and 9f are represented in the same manner as above. In addition, 9f is clearly labeled as “ethyl syn to ester”. It is therefore clear that the mixture covers the two diastereoisomers at carbon 1 shown above. Depending on whether the substituent R¹ at carbon 2 is an ethyl (Examples 9-14) or a vinyl (Examples 15-20), the mixture will cover the (R,R)/(S,S) mixture (when R¹ is ethyl) or the (R,S)/(S,R) mixture (when R¹ is vinyl), as would be clearly understood by a person skilled in the art.

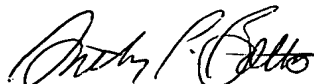
In addition, attention is directed to various other locations in the application as filed where the correct designations are set forth for particular isomers: See, e.g., the designations at page 21, lines 5 and 13 (for compounds 901 and 801, respectively); page 21, lines 18-19 (where R¹ is ethyl); page 26, line 18 (where R¹ is vinyl); pages 43-44 (where R¹ is vinyl); and original claims 43-44 (for both R¹ is ethyl and R¹ is vinyl).

In view of the above, Applicants respectfully submit that a Certificate of Correction should issue under 35 USC 255. If any questions should arise, the Office is requested

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contact the undersigned attorney at the telephone number below.

Respectfully submitted,




Anthony P. Bottino
Attorney for Applicant(s)
Reg. No. 41,629

Patent Department
Boehringer Ingelheim Corp.
900 Ridgebury Road
P.O. Box 368
Ridgefield, CT. 06877
Tel.: (203) 791-6764

I hereby certify that this correspondence is being
deposited with the U.S. Postal Service as first class
mail in an envelope addressed to:

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450
on August 14, 2003



By: Anthony P. Bottino
Reg. No. 41,629

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(Also Form PTO-1050)UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001 *et al.*

INVENTOR(S) : Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youta S. Tsantizes, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic-

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

~~The requested corrections are as follows:~~*Title page, Item*~~On page 1, section (75), the name of the first named inventor is misspelled. Please delete "Montse linas-Brunet" and insert --Montse Llinas-Brunet--~~ *and*~~On page 1, section (75), the last named inventor was incorrectly listed. Please delete "Bruno Simoneau, Laval".~~ *u**Item ABSTRACT*
~~On page 1, section (57), 6th line from the bottom, delete "C₁₀ aryl" and replace with --C₁₀ aryl--~~~~In column 3, line 17, delete "fM" and replace with --μ M--.~~~~In column 9, lines 22 and 23, delete "amino optionally substituted with C₁₋₆ alkyl".~~~~In column 14, line 67, delete "B" and replace with --R³--.~~~~In column 20, line 44, delete "syd" and replace with --syn--.~~~~In column 20, line 48, delete "(1S,2S)" and replace with --(1S,2R)--.~~~~In column 21, line 67, delete "substi" and replace with --substi--.~~~~In column 24, lines 10 and 11, delete "and R₅ is H or methyl".~~~~In column 24, line 19, delete "or".~~~~In column 24, line 20, insert -- and R₅ is H or methyl; or--.~~Note:
omit
colons
(:)

MAILING ADDRESS OF SENDER: Robert P. Raymond

Boehringer Ingelheim Corporation
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PATENT NO. 6,323,180 B1

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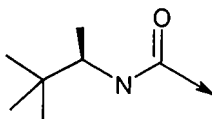
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PATENT NO : 6,323,180 B1

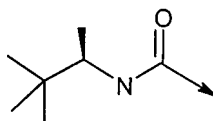
DATED : Nov. 27, 2001

INVENTOR(S) : Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:



In column 25, line 30, delete



In column 25, line 37, after "(Boc) or", insert

In column 26, line 16, insert a period after "agent".

In column 29, line 42, delete "benzylaloconol" and replace with --benzylalcohol--.

In column 30, line 63, delete "sulfide" and replace with --thiol--.

In column 33, line 22, delete "chloroform ate" and replace with --chloroformate--.

In column 35, line 45, delete "aryl" and delete the first "Het".

In column 35, lines 55 through 56, delete "Alternatively, when R²⁰ is aryl or Het, the compounds can also be" and replace with --When R²⁰ is aryl or Het, the compounds can be--

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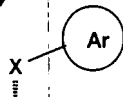
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

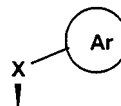
INVENTOR(S) : *et al.*
~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie~~
~~Goudreau, Marc-Andre Poupart, Jean Ranceourt, Youla S. Tsantrizos, Anne-Marie~~
~~Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent
is hereby corrected as shown below:

In column 36, line 10, in formula Vb, that portion of the formula Vb reading

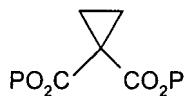


should read



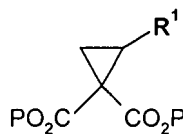
In column 36, line 20, delete "advanced" and replace with --Advanced--.

In column 36, line 45, delete



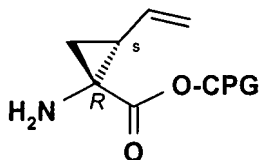
Vld

and replace with



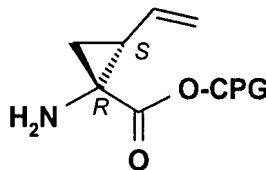
Vld

In column 41, lines 5 and 35-40:



delete

and replace with



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Ridgefield, CT 06877-0368

PATENT NO. 6,323,180 B1

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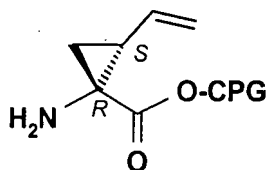
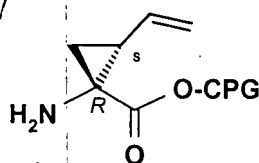
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : *et al.*
~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghilo, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 41, lines 55-60, delete the second structure:



and replace with

In column 48, line 61, delete "(1R,2R)/(1S,2R)" and replace with --(1R,2R)/(1S,2S)--.

In column 49, line 32, delete "mixture (RR)/(SR)" and replace with --mixture (RR)/(SS)--.

In column 50, line 26, delete "t-butyl-(1R,2R)/(1S,2R)" and replace with -- t-butyl-(1R,2R)/(1S,2S)--.

In column 50, line 37, delete "(R,R)/(S,R)" and replace with --(R,R)/(S,S)--.

In column 52, lines 7, 39 and 66 delete "(1R,2R)/(1S,2R)" and replace with --(1R,2R)/(1S,2S)--.

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PATENT NO. 6,323,180 B1

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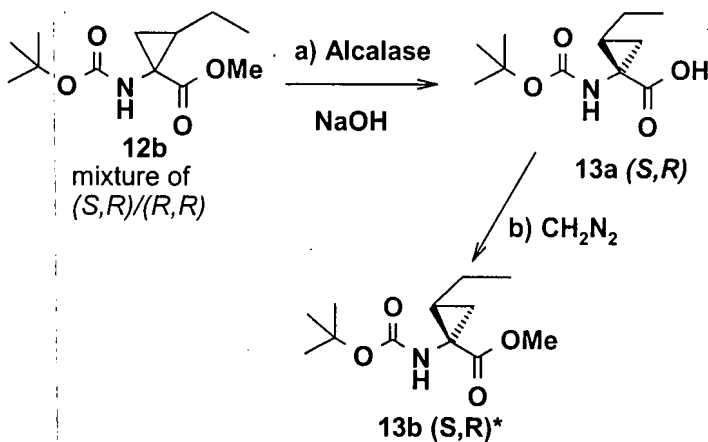
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : Montse Llinas-Brunet, Murray-D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 53, lines 1-20, delete:



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MAILING ADDRESS OF SENDER: Robert P. Raymond
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PATENT NO. 6,323,180 B1

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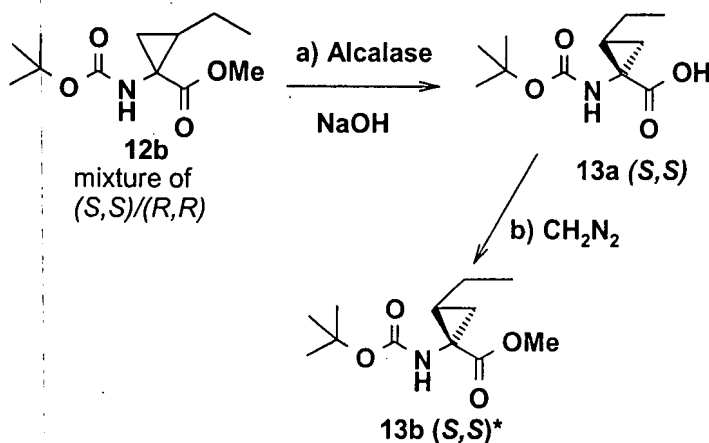
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc-Andre Roupert, Jean Rancourt, Yotita S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

and replace with:



-6-

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Ridgefield, CT 06877-0368

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PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ *et al.*

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 53, line 24, delete "(1S,2R)/(1R,2R)" and replace with --(1S,2S)/(1R,2R)--.

In column 53, line 25, delete "ethylcarboxylic" and replace with
--ethylcyclopropylcarboxylic-- and after "Example" delete "10" and replace with --12--.

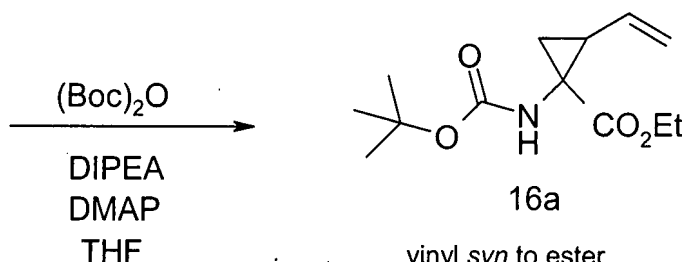
In column 53, line 43, delete "(S,R) isomer." and replace with --(S,S) isomer: (R,R) isomer.--

In column 53, line 46, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

In column 54, line 38, delete "(RS)/(SS)" and replace with --(RS)/(SR)--.

In column 55, line 23, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

In column 56, line 12, delete "(1R,2S/1S,2S)" and replace with --(1R,2S)/(1S,2R)--.



In column 56, lines 15-20, after

insert:

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Ridgefield, CT 06877-0368

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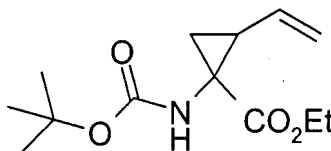
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INVENTOR(S) : Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghire, Nathalie Goudreau, Marc Andre Roupert, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 56, lines 50-55, delete: -continued



16a

vinyl syn to ester

In column 57, line 6, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

In column 57, line 24, delete "17a (S,S)" and replace with --17a (S,R)--.

In column 57, line 52, delete "(1R,2S)(1S,2S)" and replace with --(1R,2S)(1S,2R)--.

In column 57, line 63, delete "(1S,2S and 1R,2S)" and replace with --(1S,2R and 1R,2S)--.

In column 58, line 29, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

In column 59, line 11, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

In column 60, line 10, after (1R,2S) insert --/(1S,2R)--.

In column 67, line 40, in formula 26b, that part of the structure reading "H₂N⁺" should read --H₃N⁺--.

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MAILING ADDRESS OF SENDER: Robert P. Raymond
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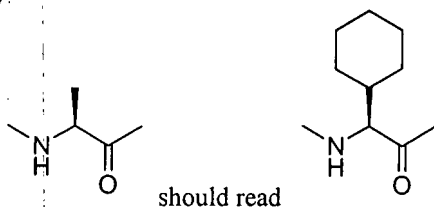
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

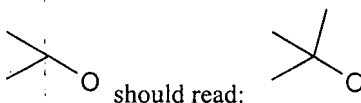
INVENTOR(S) : *et al.*
~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghirò, Nathalie~~
~~Goudreau, Marc-André Poupard, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie~~
~~Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent
 is hereby corrected as shown below:

In columns 67- 68, last line, in compounds 306 and 26d, that part of each structure reading

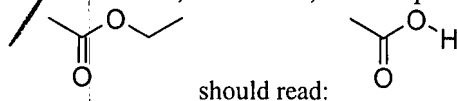


In column 69, last line, in compound 27e, that left-hand part of the structure reading



In column 72, line 13: delete "310" and replace with --311--.

In column 72, lines 14-29, in the depicted structure, that right-hand portion of the structure reading:



In column 72, line 36, delete "310" and replace with --311--.

In column 72, line 53: delete "308" and replace with --302--.

-9-

MAILING ADDRESS OF SENDER: Robert P. Raymond

Boehringer Ingelheim Corporation

900 Ridgebury Road, P. O. Box 368

Ridgefield, CT 06877-0368

PATENT NO. 6,323,180 B1

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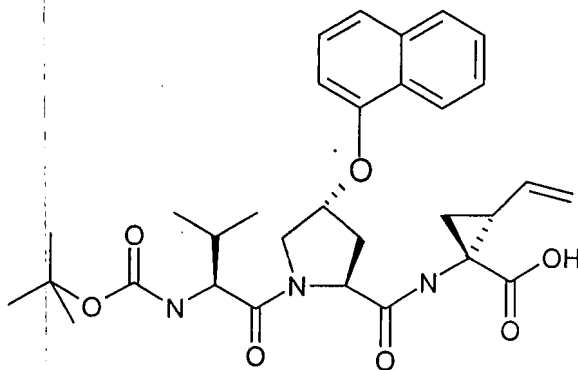
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001 *et al.*

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 72, lines 55-65, delete the structure:



-10-

MAILING ADDRESS OF SENDER: Robert P. Raymond
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Ridgefield, CT 06877-0368

PATENT NO. 6,323,180 B1

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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

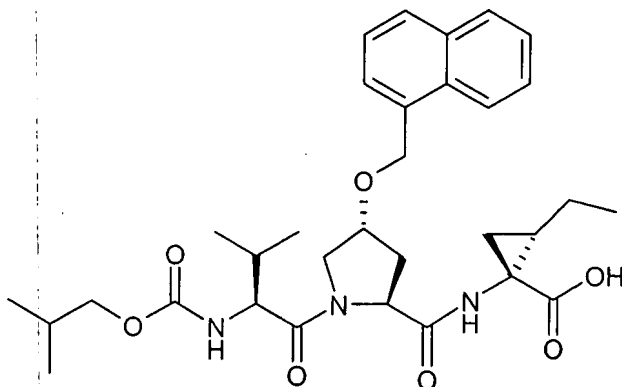
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

and replace with:



In column 74, line 11, delete "310" and replace with --305--.

In column 78, lines 30-40, in the left-hand side portion of the molecule, delete "BoCN" and replace with --BocN--.

- 11 -

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PATENT NO. 6,323,180 B1

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CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghito, Nathalie Goudreau, Marc-Andre Poupard, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

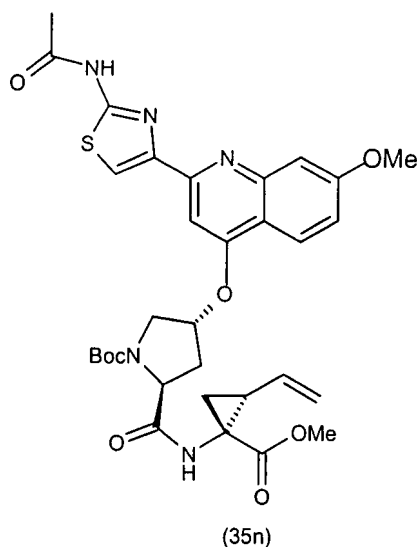
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 79, line 43, delete "(0.59 g)" and replace with --(0.59 g)--.

In column 81, line 19, delete "THF:MeOH" and replace with --THF:MeOH--.

In column 82, line 3, delete "vacua" and replace with --vacuo--.

In column 83, lines 25-45, delete the structure:



-12-

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PATENT NO. 6,323,180 B1

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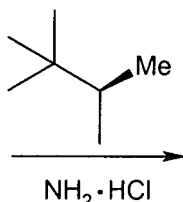
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

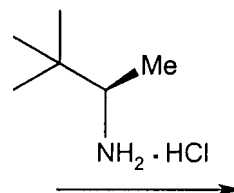
INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghiso, Nathalie Goudreau, Marc-Andre Poupard, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ *et al.*

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

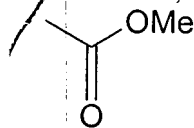
~~In column 86, lines 21-45, delete:~~



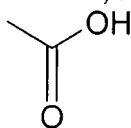
and replace with:



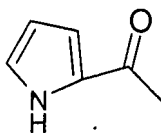
~~In column 87, lines 45-50, in compound 333, delete that right-hand part of the structure reading:~~



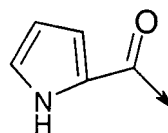
and replace with:



~~In column 141, lines 25-30, delete:~~



and replace with:



~~In column 142, line 50, delete "C14 alkyl" and insert --C₁₋₈ alkyl--.~~

~~In column 142, line 61, delete "C₁₆ alkyl" and insert --C₁₋₆ alkyl--.~~

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PATENT NO. 6,323,180 B1

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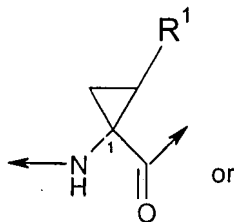
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ *et al.*

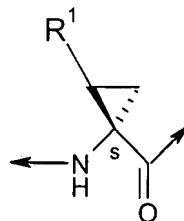
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 143, lines 45 and 46, delete "amino optionally substituted with C₁₋₆ alkyl,".



or

In column 149, line 30, delete



In column 149, line 35, delete the second structure

-14-

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PATENT NO. 6,323,180 B1

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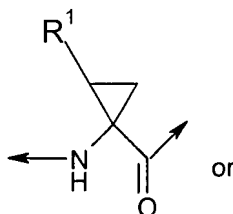
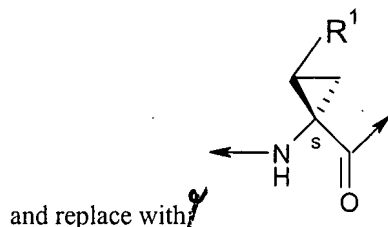
UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc Andre Poupart, Jean Rancourt, Youfa S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:



In column 149, line 55, delete

In column 150, lines 2 and 15, delete the substituent "R₁" and replace with --R¹--.

In column 150, line 12, after "carbonyl" insert --are--.

In column 151, line 39, delete "RR₄" and replace with --R₄--.

-15-

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900 Ridgebury Road, P. O. Box 368
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PATENT NO. 6,323,180 B1

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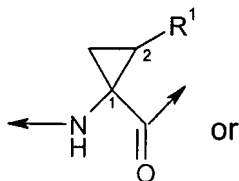
UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

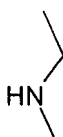
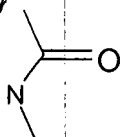


In column 152, line 25, delete:

In column 152, line 66, delete "C₃₋₇cycloalkyl," and replace with --C₃₋₇ cycloalkyl,--.

In column 154, lines 5-6, delete "is C₁₋₆" and replace with --is C₁₋₆--.

In column 163, lines 0-10, in the structure depicted underneath "R²" delete that part of the structure reading:



and replace with:

-16-

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PATENT NO. 6,323,180 B1

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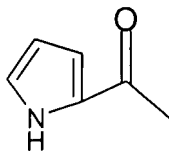
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

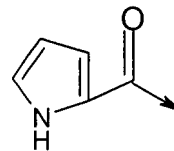
INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ *et al.*

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 187, lines 30-35 delete:



and replace with:



In column 188, lines 10-15, in the structure underneath "R²" delete that part of the structure reading:



and replace it with:



-17-

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PATENT NO. 6,323,180 B1

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CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001 *et al.*INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youta S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

~~The requested corrections are as follows:~~*Title page, Item*~~On page 1, section (75), the name of the first named inventor is misspelled. Please delete "Montse linas-Brunet" and insert --Montse Llinas-Brunet--;~~ *ec*~~On page 1, section (75), the last named inventor was incorrectly listed. Please delete "Bruno Simoneau, Laval".~~ *u**Item ABSTRACT*
~~On page 1, section (57), 6th line from the bottom, delete "c₁₀ aryl" and replace with --C₁₀ aryl--~~~~In column 3, line 17, delete "fM" and replace with --μ M--.~~~~In column 9, lines 22 and 23, delete "amino optionally substituted with C₁₋₆ alkyl,".~~~~In column 14, line 67, delete "B" and replace with --R³--.~~~~In column 20, line 44, delete "syd" and replace with --syn--.~~~~In column 20, line 48, delete "(1S,2S)" and replace with --(1S,2R)--~~~~In column 21, line 67, delete "substi" and replace with --substi--.~~~~In column 24, lines 10 and 11, delete "and R₅ is H or methyl".~~~~In column 24, line 19, delete "or".~~~~In column 24, line 20, insert -- and R₅ is H or methyl; or--.~~

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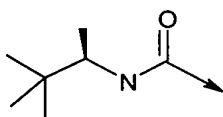
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

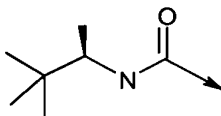
INVENTOR(S) : Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc-Andre Poupert, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 25, line 30, delete



In column 25, line 37, after "(Boc) or", insert



In column 26, line 16, insert a period after "agent".

In column 29, line 42, delete "benzylalcoanol" and replace with --benzylalcohol--.

In column 30, line 63, delete "sulfide" and replace with --thiol--.

In column 33, line 22, delete "chloroform ate" and replace with --chloroformate--.

In column 35, line 45, delete "aryl" and delete the first "Het".

In column 35, lines 55 through 56, delete "Alternatively, when R²⁰ is aryl or Het, the compounds can also be" and replace with --When R²⁰ is aryl or Het, the compounds can be--

-2-

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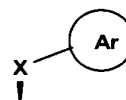
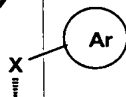
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : *et al.*
~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc-Andre Poupart, Jean Ranceurt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Falmos, Dominik M. Wernic~~

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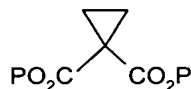
In column 36, line 10, in formula Vb, that portion of the formula Vb reading



should read

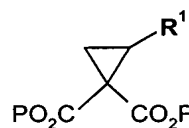
In column 36, line 20, delete "advanced" and replace with --Advanced--.

In column 36, line 45, delete



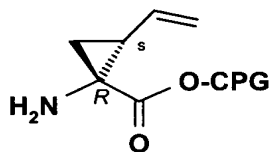
Vld

and replace with



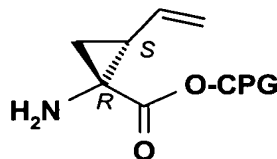
Vld

In column 41, lines 5 and 35-40:



delete

and replace with



MAILING ADDRESS OF SENDER: Robert P. Raymond
 Boehringer Ingelheim Corporation
 900 Ridgebury Road, P. O. Box 368
 Ridgefield, CT 06877-0368

PATENT NO. 6,323,180 B1

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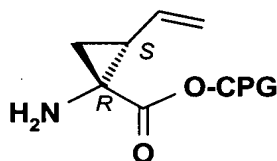
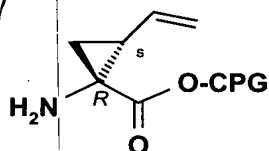
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : *et al.*
~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghilo, Nathalie Goudreau, Marc-Andre Poupard, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 41, lines 55-60, delete the second structure:



and replace with

In column 48, line 61, delete "(1R,2R)/(1S,2R)" and replace with --(1R,2R)/(1S,2S)--.

In column 49, line 32, delete "mixture (RR)/(SR)" and replace with --mixture (RR)/(SS)--.

In column 50, line 26, delete "t-butyl-(1R,2R)/(1S,2R)" and replace with -- t-butyl-(1R,2R)/(1S,2S)--.

In column 50, line 37, delete "(R,R)/(S,R)" and replace with --(R,R)/(S,S)--.

In column 52, lines 7, 39 and 66 delete "(1R,2R)/(1S,2R)" and replace with --(1R,2R)/(1S,2S)--.

-4-

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PATENT NO. 6,323,180 B1

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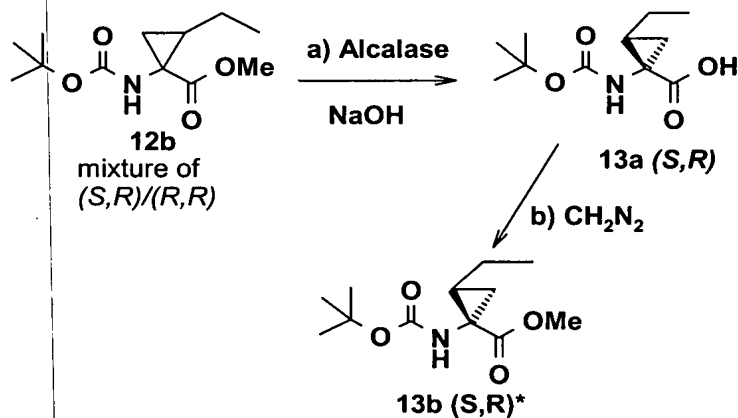
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : *et al.*
~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Roupert, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

~~In~~ column 53, lines 1-20, delete:



-5-

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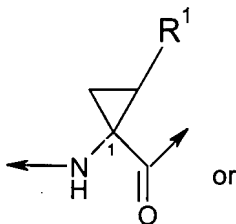
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

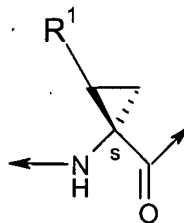
INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ *et al.*

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 143, lines 45 and 46, delete "amino optionally substituted with C₁₋₆ alkyl,".



In column 149, line 30, delete:



In column 149, line 35, delete the second structure:

-14-

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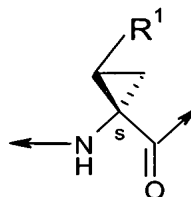
UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

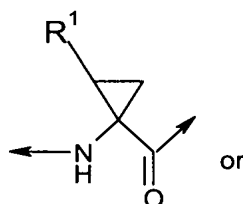
DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:



and replace with:



In column 149, line 55, delete:

In column 150, lines 2 and 15, delete the substituent "R₁" and replace with --R¹--.

In column 150, line 12, after "carbonyl" insert --are--.

In column 151, line 39, delete "RR₄" and replace with --R₄--.

-15-

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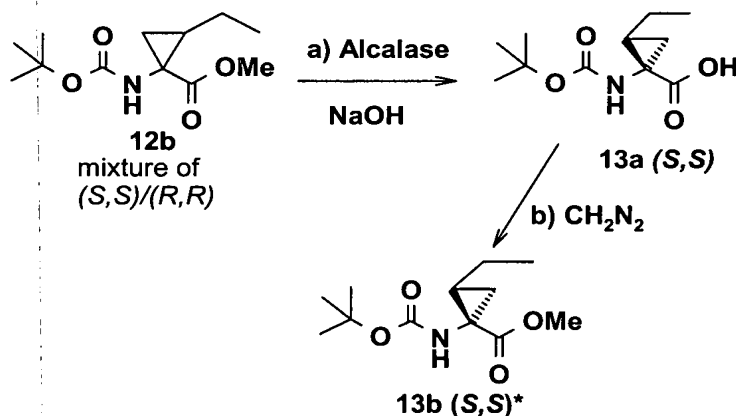
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc-Andre Roupari, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ *et al.*

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

and replace with:



-6-

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Ridgefield, CT 06877-0368

PATENT NO. 6,323,180 B1

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UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : Montse Llinas-Brunet, *et al.*, ~~Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc-Andre Poupart, Jean-Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 53, line 24, delete "(1S,2R)/(1R,2R)" and replace with --(1S,2S)/(1R,2R)--.

In column 53, line 25, delete "ethylcarboxylic" and replace with: --ethylcyclopropylcarboxylic-- and after "Example" delete "10" and replace with --12--.

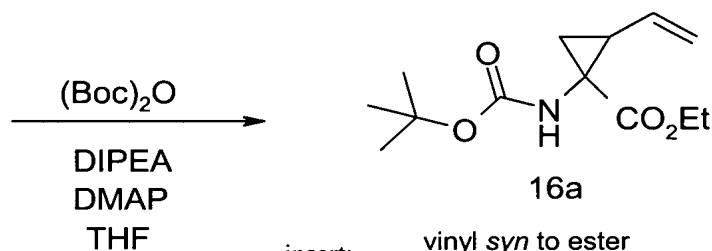
In column 53, line 43, delete "(S,R) isomer." and replace with --(S,S) isomer: (R,R) isomer--.

In column 53, line 46, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

In column 54, line 38, delete "(RS)/(SS)" and replace with --(RS)/(SR)--.

In column 55, line 23, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

In column 56, line 12, delete "(1R,2S/1S,2S)" and replace with --(1R,2S)/(1S,2R)--.



In column 56, lines 15-20, after

insert:

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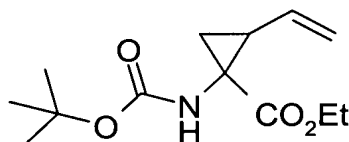
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PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie
Goudreau, Marc Andre Roupert, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie
Fischer, Teddy Halmos, Dominik M. WernicIt is certified that error appears in the above-identified patent and that said Letters Patent
is hereby corrected as shown below:

In column 56, lines 50-55, delete: -continued



16a

vinyl syn to ester

In column 57, line 6, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

In column 57, line 24, delete "17a (S,S)" and replace with --17a (S,R)--.

In column 57, line 52, delete "(1R,2S)(1S,2S)" and replace with --(1R,2S)(1S,2R)--.

In column 57, line 63, delete "(1S,2S and 1R,2S)" and replace with --(1S,2R and 1R,2S)--.

In column 58, line 29, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

In column 59, line 11, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

In column 60, line 10, after (1R,2S) insert --(1S,2R)--.

In column 67, line 40, in formula 26b, that part of the structure reading "H₂N⁺" should read --H₃N⁺--.

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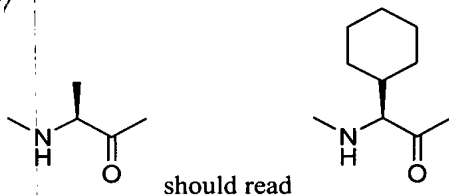
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

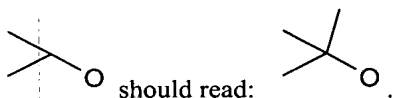
INVENTOR(S) : *et al.*
~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie~~
~~Goudreau, Marc Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne Marie~~
~~Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent
 is hereby corrected as shown below:

In columns 67- 68, last line, in compounds 306 and 26d, that part of each structure reading

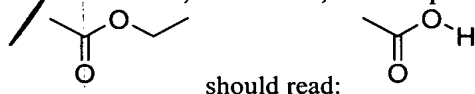


In column 69, last line, in compound 27e, that left-hand part of the structure reading



In column 72, line 13: delete "310" and replace with --311--.

In column 72, lines 14-29, in the depicted structure, that right-hand portion of the structure reading:



In column 72, line 36, delete "310" and replace with --311--.

In column 72, line 53: delete "308" and replace with --302--.

-9-

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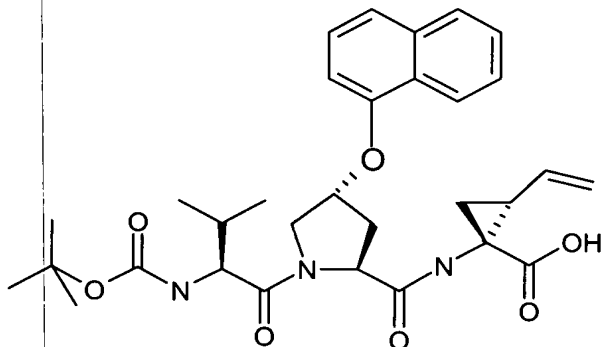
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc-Andre Poupard, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 72, lines 55-65, delete the structure:



-10-

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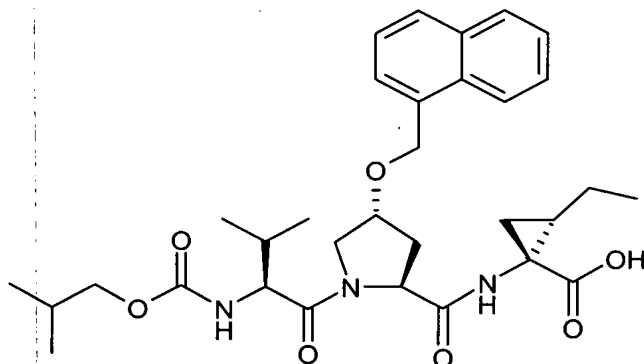
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie~~
~~Goudreau, Marc-Andre Roupert, Jean-Rancourt, Youla S. Tsantrizos, Anne-Marie~~
~~Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

and replace with:



In column 74, line 11, delete "310" and replace with --305--.

In column 78, lines 30-40, in the left-hand side portion of the molecule, delete "BoCN" and replace with --BocN--.

-11-

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PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ *et al*

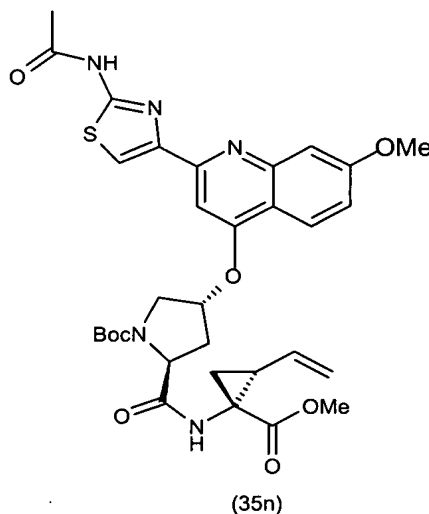
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 79, line 43, delete "(0.59 9)" and replace with --(0.59 g)--.

In column 81, line 19, delete "THF:MeoH" and replace with --THF:MeOH--.

In column 82, line 3, delete "vacua" and replace with --vacuo--.

In column 83, lines 25-45, delete the structure:



-12-

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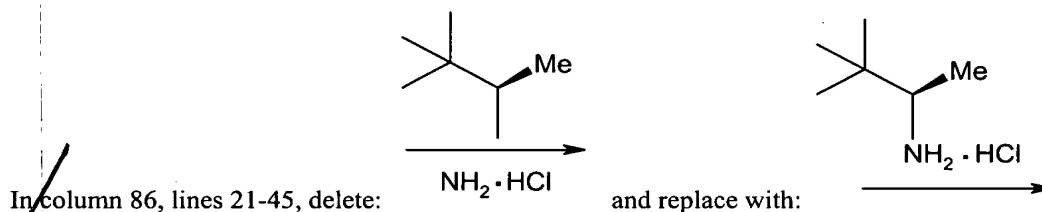
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PATENT NO : 6,323,180 B1

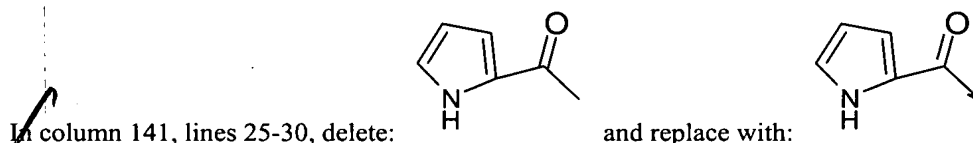
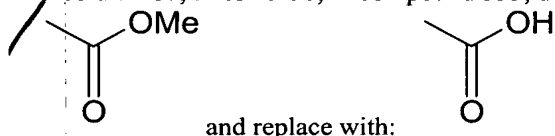
DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Feddy Halmos, Dominik M. Wernic~~ *et al.*

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:



In column 87, lines 45-50, in compound 333, delete that right-hand part of the structure reading:



In column 142, line 50, delete "C14 alkyl" and insert --C₁₋₈ alkyl--.

In column 142, line 61, delete "C₁₆ alkyl" and insert --C₁₋₆ alkyl--.

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PATENT NO. 6,323,180 B1

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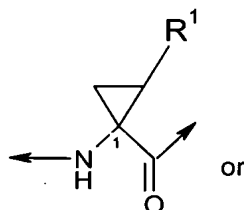
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CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

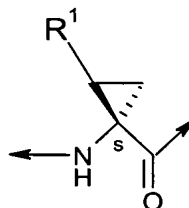
DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ *et al.*

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 143, lines 45 and 46, delete "amino optionally substituted with C₁₋₆ alkyl,".

or



In column 149, line 30, delete:

In column 149, line 35, delete the second structure:

-14-

MAILING ADDRESS OF SENDER: Robert P. Raymond
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Ridgefield, CT 06877-0368

PATENT NO. 6,323,180 B1

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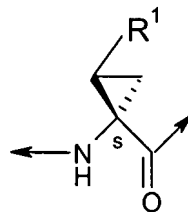
UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

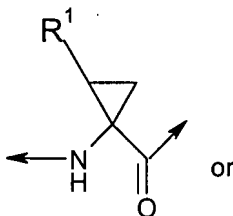
DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc Andre Roupert, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ *et al.*

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:



and replace with:



~~In~~ column 149, line 55, delete:

~~In~~ column 150, lines 2 and 15, delete the substituent "R₁" and replace with --R¹--.

~~In~~ column 150, line 12, after "carbonyl" insert --are--.

~~In~~ column 151, line 39, delete "RR₄" and replace with --R₄--.

-15-

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PATENT NO. 6,323,180 B1

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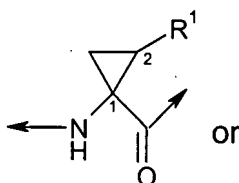
UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ ^{et al.}

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

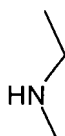
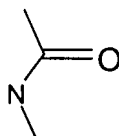


In column 152, line 25, delete:

In column 152, line 66, delete "C₃₋₇cycloalkyl," and replace with --C₃₋₇ cycloalkyl,--.

In column 154, lines 5-6, delete "is C₁₋₆" and replace with --is C₁₋₆--.

In column 163, lines 0-10, in the structure depicted underneath "R²" delete that part of the structure reading:



and replace with:

-16-

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900 Ridgebury Road, P. O. Box 368
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PATENT NO. 6,323,180 B1

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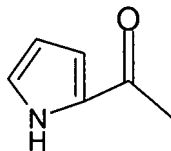
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

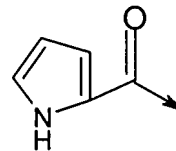
INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc Andre Poupard, Jean Rancourt, Youla S. Tsantizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ *et al.*

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

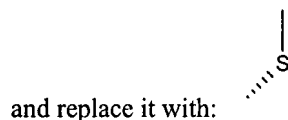
~~In~~ column 187, lines 30-35 delete:



and replace with:



~~In~~ column 188, lines 10-15, in the structure underneath "R²" delete that part of the structure reading:



-17-

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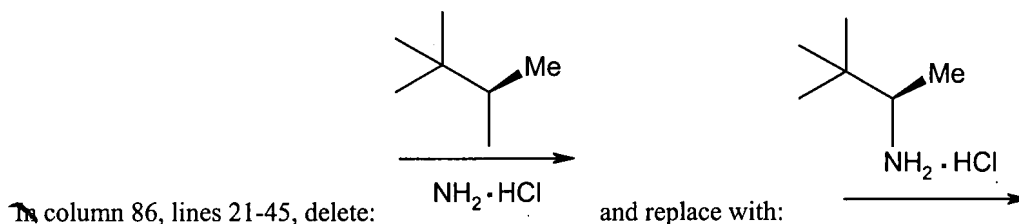
UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

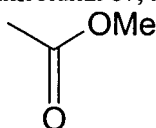
DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ *et al.*

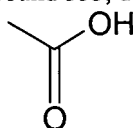
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:



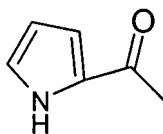
~~In~~ column 87, lines 45-50, in compound 333, delete that right-hand part of the structure reading:



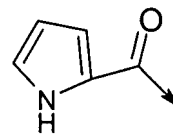
and replace with:



~~In~~ column 141, lines 25-30, delete:



and replace with:



~~In~~ column 142, line 50, delete "C14 alkyl" and insert --C₁₋₈ alkyl--.

~~In~~ column 142, line 61, delete "C₁₆ alkyl" and insert --C₁₋₆ alkyl--.

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PATENT NO. 6,323,180 B1

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BMG

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pg. 1 of 17

PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

at 2

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghro, Nathalie Goudreau, Marc Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne Marie Faucher, Teddy Halmes, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

The requested corrections are as follows:

Title Item

On page 1, section (75), the name of the first-named inventor is misspelled. Please delete "Montse linas-Brunet" and insert --Montse Llinas-Brunet--.

On page 1, section (75), the last named inventor was incorrectly listed. Please delete "Bruno Simoneau, Laval".

Title Item

On page 1, section (57), 6th line from the bottom, delete "c₁₀ aryl" and replace with --C₁₀ aryl--

In column 3, line 17, delete "fM" and replace with --μ M--.

In column 9, lines 22 and 23, delete "amino optionally substituted with C₁₋₆ alkyl,".

In column 14, line 67, delete "B" and replace with --R³--.

In column 20, line 44, delete "syd" and replace with --syn--.

In column 20, line 48, delete "(1S,2S)" and replace with --(1S,2R)--

In column 21, line 67, delete "substi" and replace with --substi- --.

In column 24, lines 10 and 11, delete "and R₅ is H or methyl".

In column 24, line 19, delete "or".

In column 24, line 20, insert -- and R₅ is H or methyl; or--.

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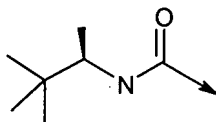
UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

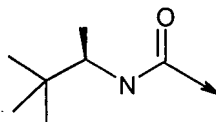
DATED : Nov. 27, 2001

INVENTOR(S) : *et al*
~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Holmes, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:



~~In~~ column 25, line 30, delete



~~In~~ column 25, line 37, after "(Boc) or", insert

~~In~~ column 26, line 16, insert a period after "agent".

~~In~~ column 29, line 42, delete "benzylalcohol" and replace with --benzylalcohol--.

~~In~~ column 30, line 63, delete "sulfide" and replace with --thiol--.

~~In~~ column 33, line 22, delete "chloroform ate" and replace with --chloroformate--.

~~In~~ column 35, line 45, delete "aryl" and delete the first "Het".

~~In~~ column 35, lines 55 through 56, delete "Alternatively, when R²⁰ is aryl or Het, the compounds can also be" and replace with --When R²⁰ is aryl or Het, the compounds can be--

-2-

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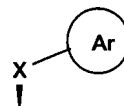
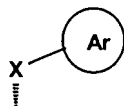
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ *et al.*

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

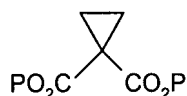
In column 36, line 10, in formula Vb, that portion of the formula Vb reading



should read

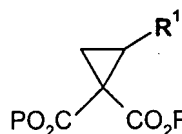
In column 36, line 20, delete "advanced" and replace with --Advanced--.

In column 36, line 45, delete



Vld

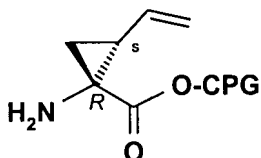
and replace with



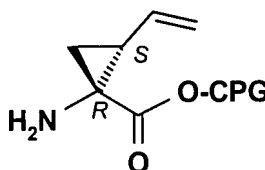
Vld

In column 41, lines 5 and 35-40:

delete



and replace with



-3-

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PATENT NO. 6,323,180 B1

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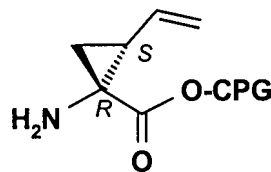
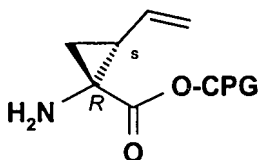
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : Montse Llinas-Brunet, ^{et al.} Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupard, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

~~In~~ column 41, lines 55-60, delete the second structure:



and replace with

~~In~~ column 48, line 61, delete "(1R,2R)/(1S,2R)" and replace with --(1R,2R)/(1S,2S)--.

~~In~~ column 49, line 32, delete "mixture (RR)/(SR)" and replace with --mixture (RR)/(SS)--.

~~In~~ column 50, line 26, delete "t-butyl-(1R,2R)/(1S,2R)" and replace with -- t-butyl-(1R,2R)/(1S,2S)--.

~~In~~ column 50, line 37, delete "(R,R)/(S,R)" and replace with --(R,R)/(S,S)--.

~~In~~ column 52, lines 7, 39 and 66 delete "(1R,2R)/(1S,2R)" and replace with --(1R,2R)/(1S,2S)--.

-4-

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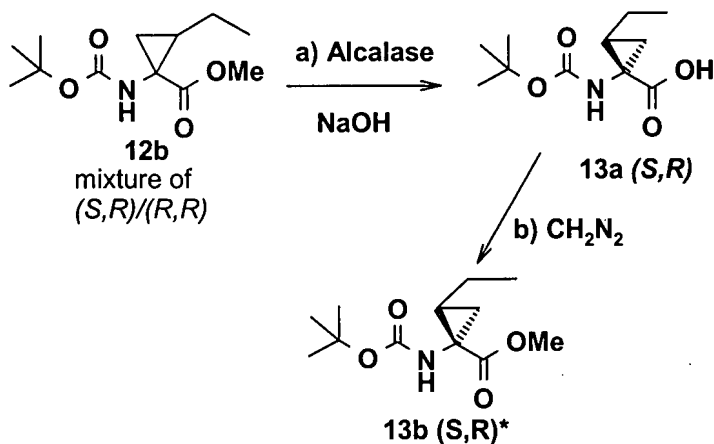
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc Andre Poupard, Jean Rancourt, Youla S. Tsantrizos, Anne Marie Faucher, Teddy Halmes, Dominik M. Wernic~~ ^{et al.}

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 53, lines 1-20, delete:



-5-

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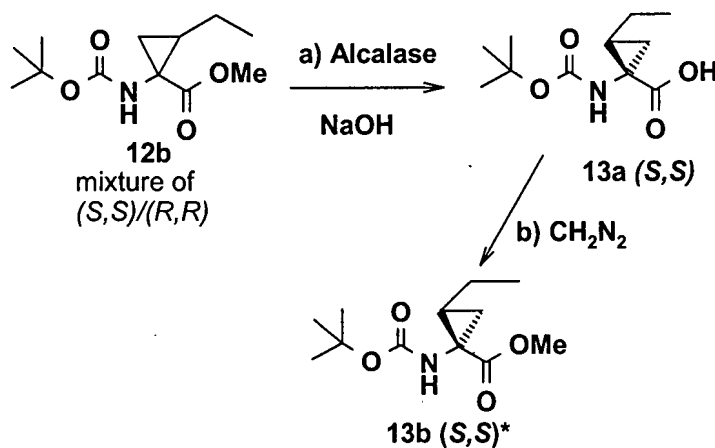
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupard, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Patcher, Teddy Halmos, Dominik M. Wernic~~ ^{et al.}

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

and replace with:



-6-

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UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghire, Nathalie Goudreau, Marc Andre Roupert, Jean Rancourt, Youla S. Tsantrizos, Anne Marie Faucher, Freddy Halmos, Dominik M. Wernic~~ *et al.*

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

~~In~~ column 53, line 24, delete "(1S,2R)/(1R,2R)" and replace with --(1S,2S)/(1R,2R)--.

~~In~~ column 53, line 25, delete "ethylcarboxylic" and replace with:
--ethylcyclopropylcarboxylic-- and after "Example" delete "10" and replace with --12--.

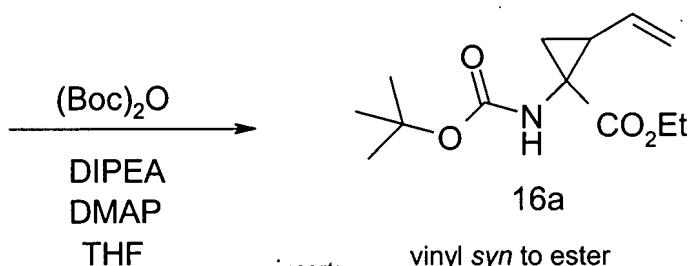
~~In~~ column 53, line 43, delete "(S,R) isomer." and replace with --(S,S) isomer: (R,R) isomer.--

~~In~~ column 53, line 46, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

~~In~~ column 54, line 38, delete "(RS)/(SS)" and replace with --(RS)/(SR)--.

~~In~~ column 55, line 23, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

~~In~~ column 56, line 12, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.



~~In~~ column 56, lines 15-20, after

insert:

-7-

MAILING ADDRESS OF SENDER: Robert P. Raymond
Boehringer Ingelheim Corporation
900 Ridgebury Road, P. O. Box 368
Ridgefield, CT 06877-0368

PATENT NO. 6,323,180 B1

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UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

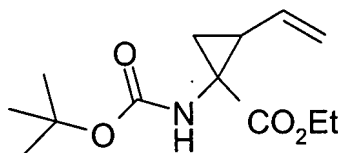
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ *et al.*

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

~~In~~ column 56, lines 50-55, delete: -continued



16a

vinyl syn to ester

~~In~~ column 57, line 6, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

~~In~~ column 57, line 24, delete "17a (S,S)" and replace with --17a (S,R)--.

~~In~~ column 57, line 52, delete "(1R,2S)(1S,2S)" and replace with --(1R,2S)(1S,2R)--.

~~In~~ column 57, line 63, delete "(1S,2S and 1R,2S)" and replace with --(1S,2R and 1R,2S)--.

~~In~~ column 58, line 29, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

~~In~~ column 59, line 11, delete "(1R,2S)/(1S,2S)" and replace with --(1R,2S)/(1S,2R)--.

~~In~~ column 60, line 10, after (1R,2S) insert --(1S,2R)--.

~~In~~ column 67, line 40, in formula 26b, that part of the structure reading "H₂N⁺" should read --H₃N⁺--.

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PATENT NO. 6,323,180 B1

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UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

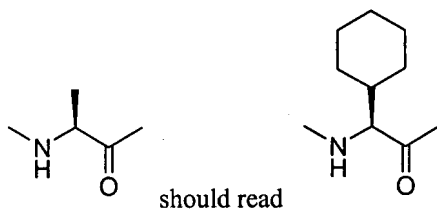
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

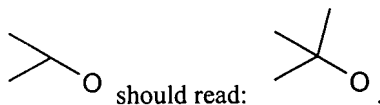
INVENTOR(S) : Montse Llinas-Brunet, ~~Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc Andre Poupart, Jean Rancourt, Youla S. Tsantizos, Anne Marie Faucher, Teddy Haimos, Dominik M. Wernie~~ *etal*

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

~~In~~ columns 67- 68, last line, in compounds 306 and 26d, that part of each structure reading

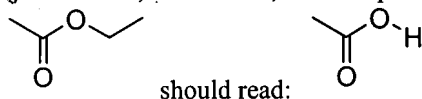


~~In~~ column 69, last line, in compound 27e, that left-hand part of the structure reading



~~In~~ column 72, line 13: delete "310" and replace with --311--.

~~In~~ column 72, lines 14-29, in the depicted structure, that right-hand portion of the structure reading:



~~In~~ column 72, line 36, delete "310" and replace with --311--.

~~In~~ column 72, line 53: delete "308" and replace with --302--.

-9-

MAILING ADDRESS OF SENDER: Robert P. Raymond
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PATENT NO. 6,323,180 B1

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UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

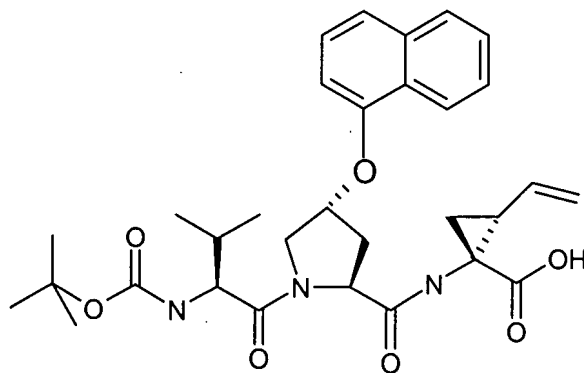
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ *et al.*

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 72, lines 55-65, delete the structure:



-10-

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PATENT NO. 6,323,180 B1

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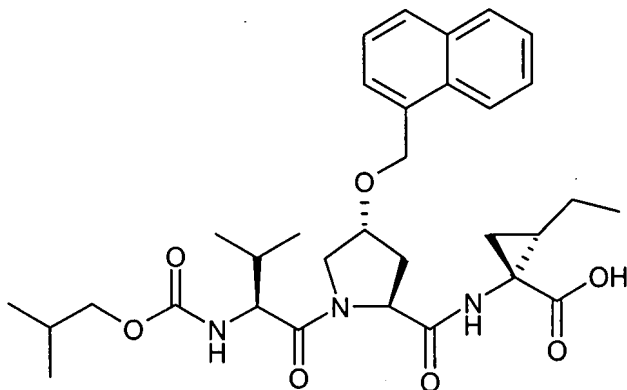
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : Montse Llinas-Brunet, ^{et al.} ~~Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

and replace with:



In column 74, line 11, delete "310" and replace with --305--.

In column 78, lines 30-40, in the left-hand side portion of the molecule, delete "BoCN" and replace with --BocN--.

-11-

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PATENT NO. 6,323,180 B1

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UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Chiro, Nathalie Goudreau, Marc Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne Marie Faucher, Teddy Halmos, Dominik M. Wernic~~ ^{et al}

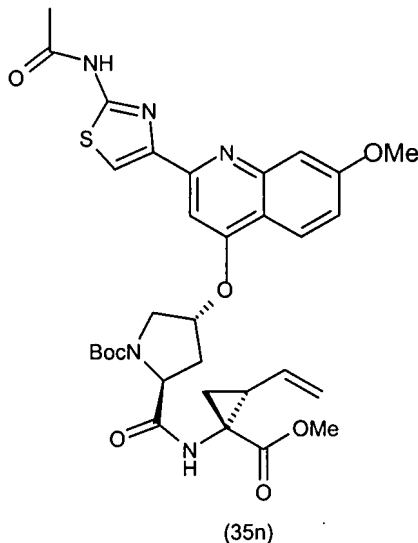
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

~~In~~ column 79, line 43, delete "(0.59 g)" and replace with --(0.59 g)--.

~~In~~ column 81, line 19, delete "THF:MeOH" and replace with --THF:MeOH--.

~~In~~ column 82, line 3, delete "vacua" and replace with --vacuo--.

~~In~~ column 83, lines 25-45, delete the structure:



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PATENT NO. 6,323,180 B1

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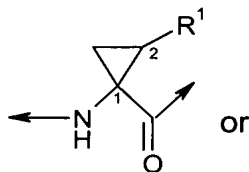
UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

INVENTOR(S) : ~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:



In column 152, line 25, delete:

In column 152, line 66, delete "C₃₋₇cycloalkyl," and replace with --C₃₋₇ cycloalkyl,--.

In column 154, lines 5-6, delete "is C₁₋₆" and replace with --is C₁₋₆--.

In column 163, lines 0-10, in the structure depicted underneath "R²" delete that part of the structure reading:



-16-

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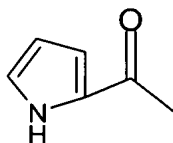
PATENT NO : 6,323,180 B1

DATED : Nov. 27, 2001

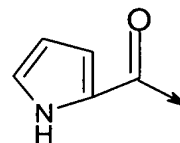
INVENTOR(S) : *etal*
~~Montse Llinas-Brunet, Murray D. Bailey, Dale Cameron, Elise Ghio, Nathalie Goudreau, Marc-Andre Poupart, Jean Rancourt, Youla S. Tsantrizos, Anne-Marie Faucher, Teddy Halmos, Dominik M. Wernic~~

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 187, lines 30-35 delete:



and replace with:



In column 188, lines 10-15, in the structure underneath "R²" delete that part of the structure reading:



and replace it with:

-17-

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PATENT NO. 6,323,180 B1

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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,323,180 B1
DATED : November 27, 2001
INVENTOR(S) : Montse Llinas-Brunet et al.

Page 1 of 7

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title page.

Item [75], please delete "**Montse linas-Brunet**" and insert -- **Montse Llinas-Brunet** --; and please delete "**Bruno Simoneau, Laval**".

Item [57], **ABSTRACT**,

Line 6, delete "_{c10} aryl" and replace with -- C₁₀ aryl --

Column 3.

Line 17, delete "fM" and replace with -- μ M --.

Column 9.

Lines 22 and 23, delete "amino optionally substituted with C₁₋₆ alkyl,".

Column 14.

Line 67, delete "B" and replace with -- R³ --.

Column 20.

Line 44, delete "syd" and replace with -- syn --.

Line 48, delete "(1S,2S)" and replace with -- (1S,2R) --.

Column 21.

Line 67, delete "substi" and replace with -- substi- --.

Column 24.

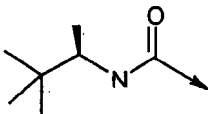
Lines 10 and 11, delete "and R₅ is H or methyl".

Line 19, delete "or".

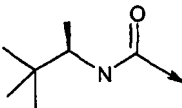
Line 20, insert -- and R₅ is H or methyl; or --.

Column 25.

Line 30, delete



Line 37, after "(Boc) or", insert



UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,323,180 B1
DATED : November 27, 2001
INVENTOR(S) : Montse Llinas-Brunet et al.

Page 2 of 7

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 26,

Line 16, insert a period after "agent".

Column 29,

Line 42, delete "benzylaloconol" and replace with -- benzylalcohol --.

Column 30,

Line 63, delete "sulfide" and replace with -- thiol --.

Column 33,

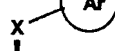
Line 22, delete "chloroform ate" and replace with -- chloroformate --.

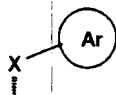
Column 35,

Line 45, delete "aryl" and delete the first "Het".

Lines 55 through 56, delete "Alternatively, when R²⁰ is aryl or Het, the compounds can also be" and replace with -- When R²⁰ is aryl or Het, the compounds can be --

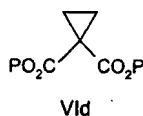
Column 36,

Line 10, in formula Vb, that portion of the formula Vb reading  should read

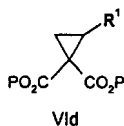


Line 20, delete "advanced" and replace with -- Advanced --.

Line 45, delete

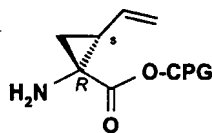


and replace with

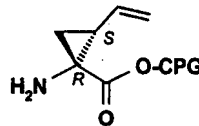


Column 41,

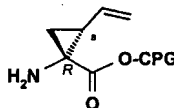
Lines 5 and 35-40, delete



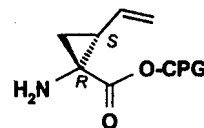
and replace with



Lines 55-60, delete the second structure



and replace with



Column 48,

Line 61, delete "(1R,2R)/(1S,2R)" and replace with -- (1R,2R)/(1S,2S) --.

Column 49,

Line 32, delete "mixture (RR)/(SR)" and replace with -- mixture (RR)/(SS) --.

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,323,180 B1
 DATED : November 27, 2001
 INVENTOR(S) : Montse Llinas-Brunet et al.

Page 3 of 7

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 50,

Line 26, delete "t-butyl-(1R,2R)/(1S,2R)" and replace with -- t-butyl-(1R,2R)/(1S,2S) --.

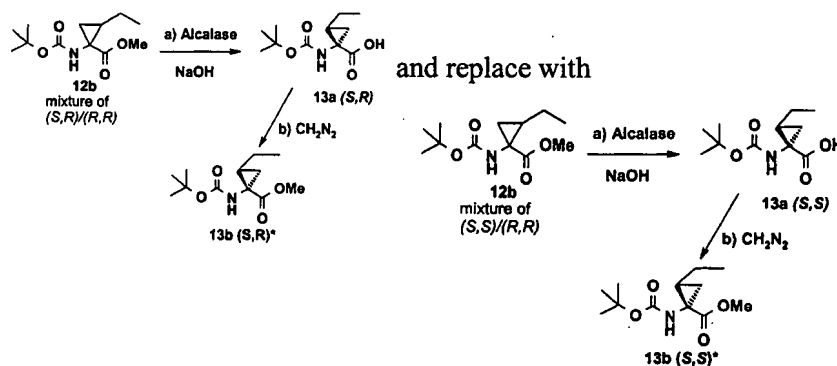
Line 37, delete "(R,R)/(S,R)" and replace with -- (R,R)/(S,S) --.

Column 52,

Lines 7, 39 and 66, delete "(1R,2R)/(1S,2R)" and replace with -- (1R,2R)/(1S,2S) --.

Column 53,

Lines 1-20, delete



Column 53,

Line 24, delete "(1S,2R)/(1R,2R)" and replace with -- (1S,2S)/(1R,2R) --.

Line 25, delete "ethylcarboxylic" and replace with -- ethylcyclopropylcarboxylic -- and after "Example" delete "10" and replace with -- 12 --.

Line 43, delete "(S,R) isomer." and replace with -- (S,S) isomer: (R,R) isomer. --

Line 46, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Column 54,

Line 38, delete "(RS)/(SS)" and replace with -- (RS)/(SR) --.

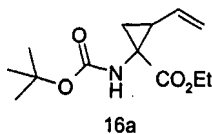
Column 55,

Line 23, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Column 56,

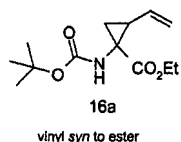
Line 12, delete "(1R,2S/1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Lines 15-20, after $\xrightarrow[\text{DIPEA, DMAP, THF}]{(\text{Boc})_2\text{O}}$ insert



vinyl syn to ester

Lines 50-55, delete



vinyl syn to ester

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,323,180 B1
DATED : November 27, 2001
INVENTOR(S) : Montse Llinas-Brunet et al.

Page 4 of 7

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 57.

Line 6, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Line 24, delete "17a (S,S)" and replace with -- 17a (S,R) --.

Line 52, delete "(1R,2S)(1S,2S)" and replace with -- (1R,2S)(1S,2R) --.

Line 63, delete "(1S,2S and 1R,2S)" and replace with -- (1S,2R and 1R,2S) --.

Column 58.

Line 29, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Column 59.

Line 11, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Column 60.

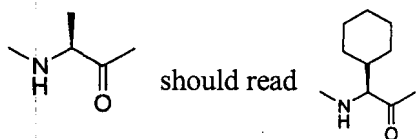
Line 10, after (1R,2S) insert --/(1S,2R) --.

Column 67.

Line 40, in formula 26b, that part of the structure reading " H_2N^+ " should read -- H_3N^+ --.

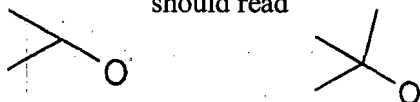
Columns 67-68.

Last line, in compounds 306 and 26d, that part of each structure reading



Column 69.

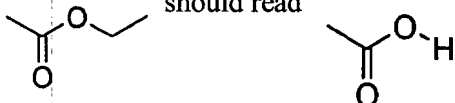
Last line, in compound 27e, that left-hand part of the structure reading
should read



Column 72.

Line 13, delete "310" and replace with -- 311 --.

Lines 14-29, in the depicted structure, that right-hand portion of the structure reading
should read



Line 36, delete "310" and replace with -- 311 --.

Line 53, delete "308" and replace with -- 302 --.

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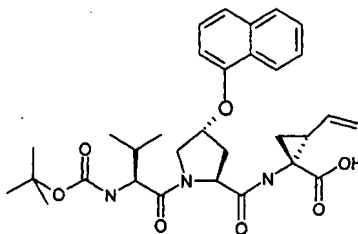
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INVENTOR(S) : Montse Llinas-Brunet et al.

Page 5 of 7

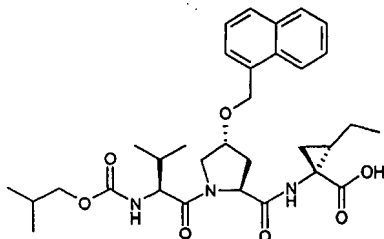
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 72 (cont'd).

Lines 55-65, delete the structure



and replace with



Column 74.

Line 11, delete "310" and replace with -- 305 --.

Column 78.

Lines 30-40, in the left-hand side portion of the molecule, delete "BoCN" and replace with -- BocN --.

Column 79.

Line 43, delete "(0.59 g)" and replace with -- (0.59 g) --.

Column 81.

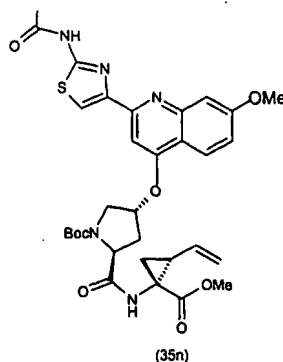
Line 19, delete "THF:MeOH" and replace with -- THF:MeOH --.

Column 82.

Line 3, delete "vacua" and replace with -- vacuo --.

Column 83.

Lines 25-45, delete the structure:



UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

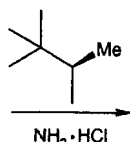
PATENT NO. : 6,323,180 B1
DATED : November 27, 2001
INVENTOR(S) : Montse Llinas-Brunet et al.

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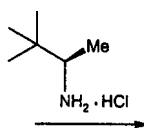
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 86,

Lines 21-45, delete

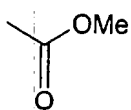


and replace with

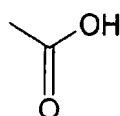


Column 87,

Lines 45-50, in compound 333, delete that right-hand part of the structure reading

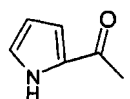


and replace with

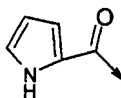


Column 141,

Lines 25-30, delete



and replace with



Column 142,

Line 50, delete "C₁₄ alkyl" and insert -- C₁₋₈ alkyl --.

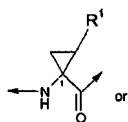
Line 61, delete "C₁₆ alkyl" and insert -- C₁₋₆ alkyl --.

Column 143,

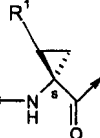
Lines 45 and 46, delete "amino optionally substituted with C₁₋₆ alkyl,".

Column 149,

Line 30, delete

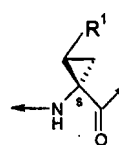


or

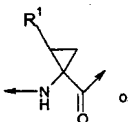


Line 35, delete the second structure

and replace with



Line 55, delete



or

Column 150,

Lines 2 and 15, delete the substituent "R₁" and replace with -- R¹ --.

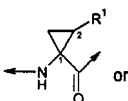
Line 12, after "carbonyl" insert -- are --.

Column 151,

Line 39, delete "RR₄" and replace with -- R₄ --.

Column 152,

Line 25, delete



or

Line 66, delete "C₃₋₇cycloalkyl," and replace with -- C₃₋₇ cycloalkyl, --.

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,323,180 B1
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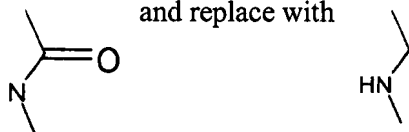
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 154,

Lines 5-6, delete "is C₁₋₆" and replace with -- is C₁₋₆ --.

Column 163,

Lines 0-10, in the structure depicted underneath "R²" delete that part of the structure reading



Column 187,

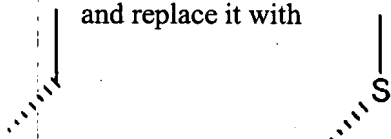
Lines 30-35, delete

and replace with

The diagram shows two identical chemical structures side-by-side. Each structure consists of a pyrrole ring (a five-membered ring with one nitrogen atom and two double bonds) with an acetyl group (-C(=O)CH₃) attached to the 2-position.

Column 188,

Lines 10-15, in the structure underneath "R²" delete that part of the structure reading:
and replace it with



Signed and Sealed this

Tenth Day of February, 2004

A handwritten signature in black ink, reading "Jon W. Dudas".

JON W. DUDAS
Acting Director of the United States Patent and Trademark Office

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,323,180 B1
DATED : November 27, 2001
INVENTOR(S) : Montse Llinas-Brunet et al.

Page 1 of 7

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title page.

Item [75], please delete "**Montse linas-Brunet**" and insert -- **Montse Llinas-Brunet** --; and please delete "**Bruno Simoneau, Laval**".

Item [57], **ABSTRACT**,

Line 6, delete "_{c10} aryl" and replace with -- C₁₀ aryl --

Column 3.

Line 17, delete "fM" and replace with -- μ M --.

Column 9.

Lines 22 and 23, delete "amino optionally substituted with C₁₋₆ alkyl,".

Column 14.

Line 67, delete "B" and replace with -- R³ --.

Column 20.

Line 44, delete "syd" and replace with -- syn --.

Line 48, delete "(1S,2S)" and replace with -- (1S,2R) --.

Column 21.

Line 67, delete "substi" and replace with -- substi- --.

Column 24.

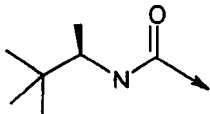
Lines 10 and 11, delete "and R₅ is H or methyl".

Line 19, delete "or".

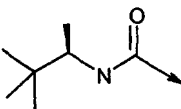
Line 20, insert -- and R₅ is H or methyl; or --.

Column 25.

Line 30, delete



Line 37, after "(Boc) or", insert



UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,323,180 B1
DATED : November 27, 2001
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Page 2 of 7

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 26,

Line 16, insert a period after "agent".

Column 29,

Line 42, delete "benzylaloconol" and replace with -- benzylalcohol --.

Column 30,

Line 63, delete "sulfide" and replace with -- thiol --.

Column 33,

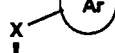
Line 22, delete "chloroform ate" and replace with -- chloroformate --.

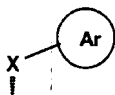
Column 35,

Line 45, delete "aryl" and delete the first "Het".

Lines 55 through 56, delete "Alternatively, when R²⁰ is aryl or Het, the compounds can also be" and replace with -- When R²⁰ is aryl or Het, the compounds can be --

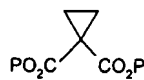
Column 36,

Line 10, in formula Vb, that portion of the formula Vb reading  should read

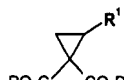


Line 20, delete "advanced" and replace with -- Advanced --.

Line 45, delete  and replace with



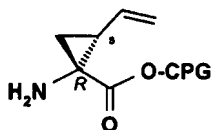
Vld



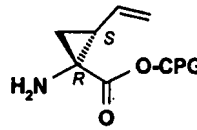
Vld

Column 41,

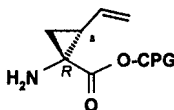
Lines 5 and 35-40, delete



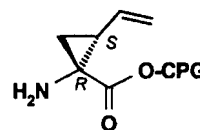
and replace with



Lines 55-60, delete the second structure



and replace with



Column 48,

Line 61, delete "(1R,2R)/(1S,2R)" and replace with -- (1R,2R)/(1S,2S) --.

Column 49,

Line 32, delete "mixture (RR)/(SR)" and replace with -- mixture (RR)/(SS) --.

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,323,180 B1
 DATED : November 27, 2001
 INVENTOR(S) : Montse Llinas-Brunet et al.

Page 3 of 7

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 50,

Line 26, delete "t-butyl-(1R,2R)/(1S,2R)" and replace with -- t-butyl-(1R,2R)/(1S,2S) --.

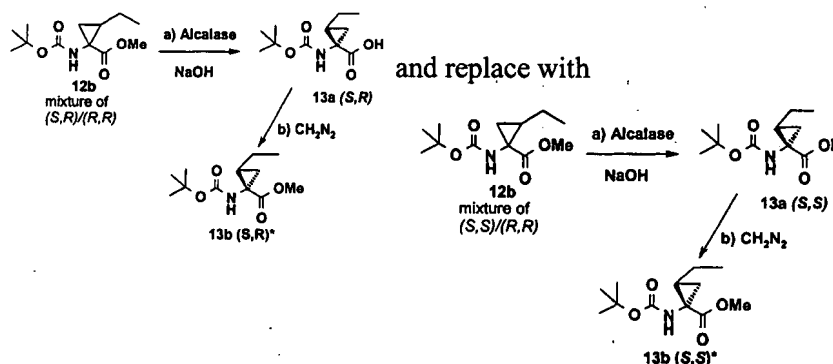
Line 37, delete "(R,R)/(S,R)" and replace with -- (R,R)/(S,S) --.

Column 52,

Lines 7, 39 and 66, delete "(1R,2R)/(1S,2R)" and replace with -- (1R,2R)/(1S,2S) --.

Column 53,

Lines 1-20, delete



Column 53,

Line 24, delete "(1S,2R)/(1R,2R)" and replace with -- (1S,2S)/(1R,2R) --.

Line 25, delete "ethylcarboxylic" and replace with -- ethylcyclopropylcarboxylic -- and after "Example" delete "10" and replace with -- 12 --.

Line 43, delete "(S,R) isomer." and replace with -- (S,S) isomer: (R,R) isomer. --

Line 46, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Column 54,

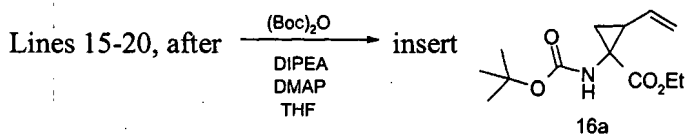
Line 38, delete "(RS)/(SS)" and replace with -- (RS)/(SR) --.

Column 55,

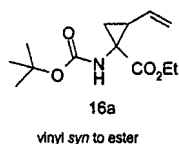
Line 23, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Column 56,

Line 12, delete "(1R,2S/1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.



Lines 50-55, delete



UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,323,180 B1
DATED : November 27, 2001
INVENTOR(S) : Montse Llinas-Brunet et al.

Page 4 of 7

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 57,

Line 6, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Line 24, delete "17a (S,S)" and replace with -- 17a (S,R) --.

Line 52, delete "(1R,2S)(1S,2S)" and replace with -- (1R,2S)(1S,2R) --.

Line 63, delete "(1S,2S and 1R,2S)" and replace with -- (1S,2R and 1R,2S) --.

Column 58,

Line 29, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Column 59,

Line 11, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Column 60,

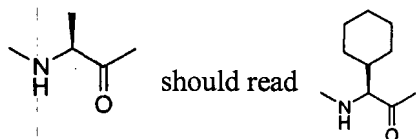
Line 10, after (1R,2S) insert -- /(1S,2R) --.

Column 67,

Line 40, in formula 26b, that part of the structure reading " H_2N^+ " should read -- H_3N^+ --.

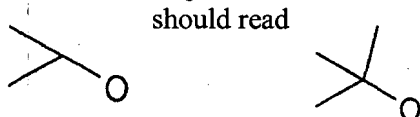
Columns 67-68,

Last line, in compounds 306 and 26d, that part of each structure reading



Column 69,

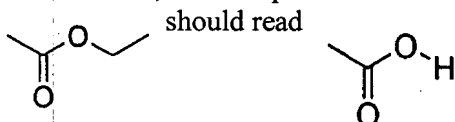
Last line, in compound 27e, that left-hand part of the structure reading



Column 72,

Line 13, delete "310" and replace with -- 311 --.

Lines 14-29, in the depicted structure, that right-hand portion of the structure reading



Line 36, delete "310" and replace with -- 311 --.

Line 53, delete "308" and replace with -- 302 --.

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

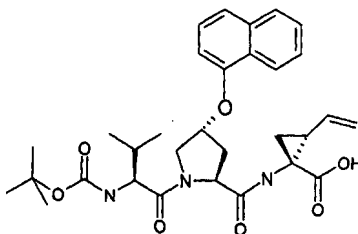
PATENT NO. : 6,323,180 B1
DATED : November 27, 2001
INVENTOR(S) : Montse Llinas-Brunet et al.

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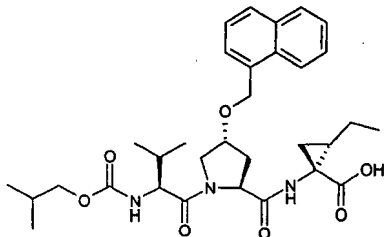
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 72 (cont'd).

Lines 55-65, delete the structure



and replace with



Column 74.

Line 11, delete "310" and replace with -- 305 --.

Column 78.

Lines 30-40, in the left-hand side portion of the molecule, delete "BoCN" and replace with -- BocN --.

Column 79.

Line 43, delete "(0.59 g)" and replace with -- (0.59 g) --.

Column 81.

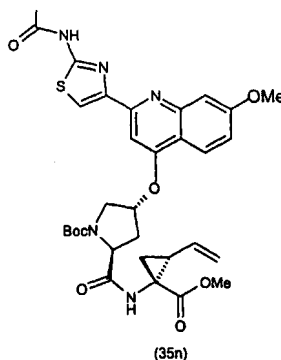
Line 19, delete "THF:MeOH" and replace with -- THF:MeOH --.

Column 82.

Line 3, delete "vacua" and replace with -- vacuo --.

Column 83.

Lines 25-45, delete the structure:



UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

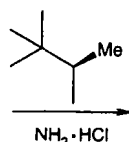
PATENT NO. : 6,323,180 B1
DATED : November 27, 2001
INVENTOR(S) : Montse Llinas-Brunet et al.

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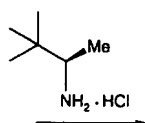
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 86,

Lines 21-45, delete

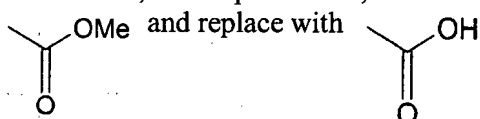


and replace with

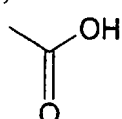


Column 87,

Lines 45-50, in compound 333, delete that right-hand part of the structure reading

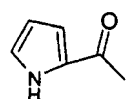


and replace with

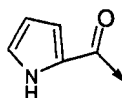


Column 141,

Lines 25-30, delete



and replace with



Column 142,

Line 50, delete "C14 alkyl" and insert -- C₁₋₈ alkyl --.

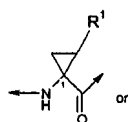
Line 61, delete "C₁₆ alkyl" and insert -- C₁₋₆ alkyl --.

Column 143,

Lines 45 and 46, delete "amino optionally substituted with C₁₋₆ alkyl,".

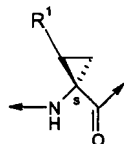
Column 149,

Line 30, delete

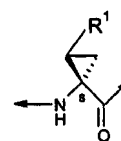


or

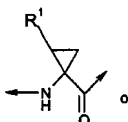
Line 35, delete the second structure



and replace with



Line 55, delete



or

Column 150,

Lines 2 and 15, delete the substituent "R₁" and replace with -- R¹ --.

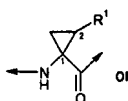
Line 12, after "carbonyl" insert -- are --.

Column 151,

Line 39, delete "RR₄" and replace with -- R₄ --.

Column 152,

Line 25, delete



or

Line 66, delete "C₃₋₇cycloalkyl," and replace with -- C₃₋₇ cycloalkyl, --.

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,323,180 B1
DATED : November 27, 2001
INVENTOR(S) : Montse Llinas-Brunet et al.

Page 7 of 7

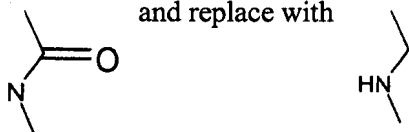
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 154,

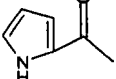
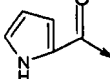
Lines 5-6, delete "is C₁₋₆" and replace with -- is C₁₋₆ --.

Column 163,

Lines 0-10, in the structure depicted underneath "R²" delete that part of the structure reading

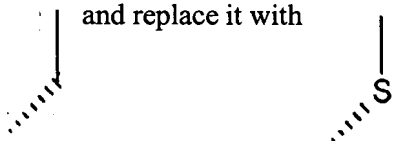


Column 187,

Lines 30-35, delete  and replace with 

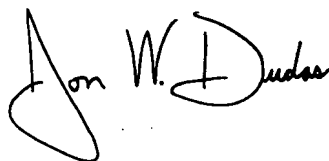
Column 188,

Lines 10-15, in the structure underneath "R²" delete that part of the structure reading:
and replace it with



Signed and Sealed this

Third Day of February, 2004



JON W. DUDAS
Acting Director of the United States Patent and Trademark Office

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,323,180 B1
DATED : November 27, 2001
INVENTOR(S) : Montse Llinas-Brunet et al.

Page 1 of 7

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title page.

Item [75], please delete "Montse linas-Brunet" and insert -- **Montse Llinas-Brunet** --; and please delete "Bruno Simoneau, Laval".

Item [57], **ABSTRACT**,

Line 6, delete "_{c10} aryl" and replace with -- C₁₀ aryl --.

Column 3.

Line 17, delete "fM" and replace with -- μ M --.

Column 9.

Lines 22 and 23, delete "amino optionally substituted with C₁₋₆ alkyl,".

Column 14.

Line 67, delete "B" and replace with -- R³ --.

Column 20.

Line 44, delete "syd" and replace with -- syn --.

Line 48, delete "(1S,2S)" and replace with -- (1S,2R) --.

Column 21.

Line 67, delete "substi" and replace with -- substi- --.

Column 24.

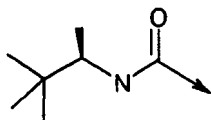
Lines 10 and 11, delete "and R₅ is H or methyl".

Line 19, delete "or".

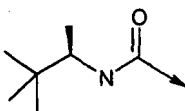
Line 20, insert -- and R₅ is H or methyl; or --.

Column 25.

Line 30, delete



Line 37, after "(Boc) or", insert



UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

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INVENTOR(S) : Montse Llinas-Brunet et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 26,

Line 16, insert a period after "agent".

Column 29,

Line 42, delete "benzylaloconol" and replace with -- benzylalcohol --.

Column 30,

Line 63, delete "sulfide" and replace with -- thiol --.

Column 33,

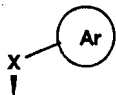
Line 22, delete "chloroform ate" and replace with -- chloroformate --.

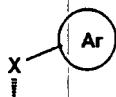
Column 35,

Line 45, delete "aryl" and delete the first "Het".

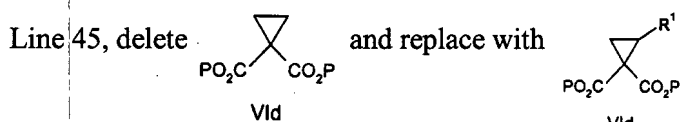
Lines 55 through 56, delete "Alternatively, when R²⁰ is aryl or Het, the compounds can also be" and replace with -- When R²⁰ is aryl or Het, the compounds can be --

Column 36,

Line 10, in formula Vb, that portion of the formula Vb reading  should read

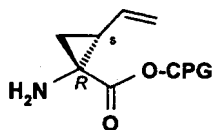


Line 20, delete "advanced" and replace with -- Advanced --.

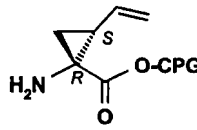


Column 41,

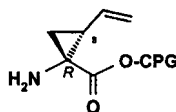
Lines 5 and 35-40, delete



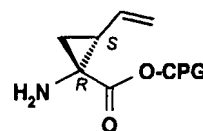
and replace with



Lines 55-60, delete the second structure



and replace with



Column 48,

Line 61, delete "(1R,2R)/(1S,2R)" and replace with -- (1R,2R)/(1S,2S) --.

Column 49,

Line 32, delete "mixture (RR)/(SR)" and replace with -- mixture (RR)/(SS) --.

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 50,

Line 26, delete "t-butyl-(1R,2R)/(1S,2R)" and replace with -- t-butyl-(1R,2R)/(1S,2S) --.

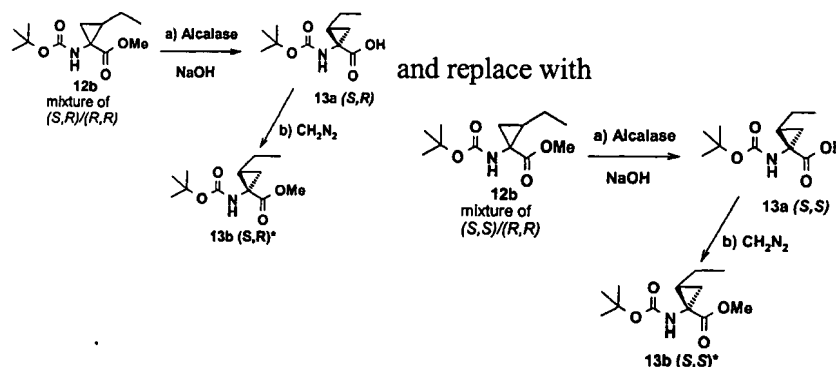
Line 37, delete "(R,R)/(S,R)" and replace with -- (R,R)/(S,S) --.

Column 52,

Lines 7, 39 and 66, delete "(1R,2R)/(1S,2R)" and replace with -- (1R,2R)/(1S,2S) --.

Column 53,

Lines 1-20, delete



Column 53,

Line 24, delete "(1S,2R)/(1R,2R)" and replace with -- (1S,2S)/(1R,2R) --.

Line 25, delete "ethylcarboxylic" and replace with -- ethylcyclopropylcarboxylic -- and after "Example" delete "10" and replace with -- 12 --.

Line 43, delete "(S,R) isomer." and replace with -- (S,S) isomer: (R,R) isomer. --

Line 46, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Column 54,

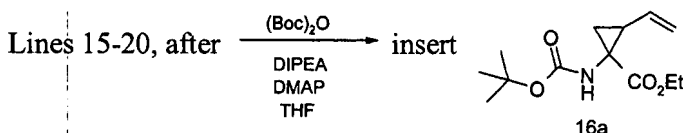
Line 38, delete "(RS)/(SS)" and replace with -- (RS)/(SR) --.

Column 55,

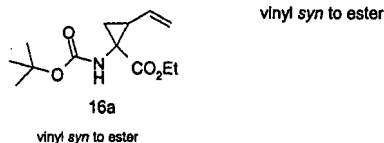
Line 23, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Column 56,

Line 12, delete "(1R,2S/1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.



Lines 50-55, delete



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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 57,

Line 6, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Line 24, delete "17a (S,S)" and replace with -- 17a (S,R) --.

Line 52, delete "(1R,2S)(1S,2S)" and replace with -- (1R,2S)(1S,2R) --.

Line 63, delete "(1S,2S and 1R,2S)" and replace with -- (1S,2R and 1R,2S) --.

Column 58,

Line 29, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Column 59,

Line 11, delete "(1R,2S)/(1S,2S)" and replace with -- (1R,2S)/(1S,2R) --.

Column 60,

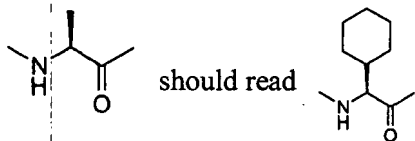
Line 10, after (1R,2S) insert --/(1S,2R) --.

Column 67,

Line 40, in formula 26b, that part of the structure reading " H_2N^+ " should read -- H_3N^+ --.

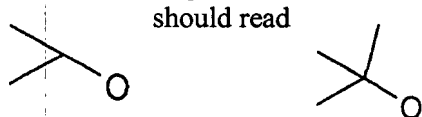
Columns 67-68,

Last line, in compounds 306 and 26d, that part of each structure reading



Column 69,

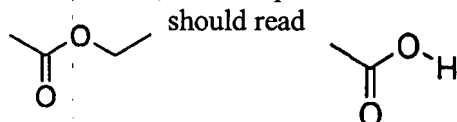
Last line, in compound 27e, that left-hand part of the structure reading



Column 72,

Line 13, delete "310" and replace with -- 311 --.

Lines 14-29, in the depicted structure, that right-hand portion of the structure reading



Line 36, delete "310" and replace with -- 311 --.

Line 53, delete "308" and replace with -- 302 --.

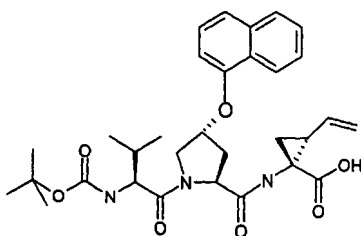
UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,323,180 B1
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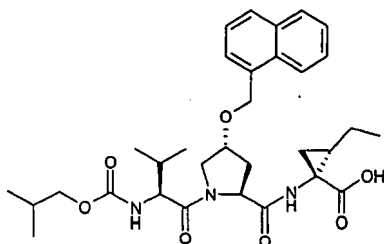
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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 72 (cont'd),
Lines 55-65, delete the structure



and replace with



Column 74,
Line 11, delete "310" and replace with -- 305 --.

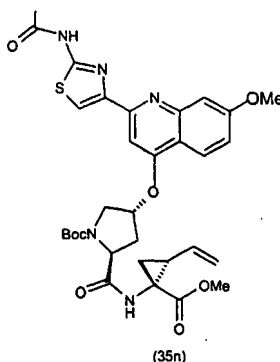
Column 78,
Lines 30-40, in the left-hand side portion of the molecule, delete "BoCN" and replace with -- BocN --.

Column 79,
Line 43, delete "(0.59 9)" and replace with -- (0.59 g) --.

Column 81,
Line 19, delete "THF:MeOH" and replace with -- THF:MeOH --.

Column 82,
Line 3, delete "vacua" and replace with -- vacuo --.

Column 83,
Lines 25-45, delete the structure:



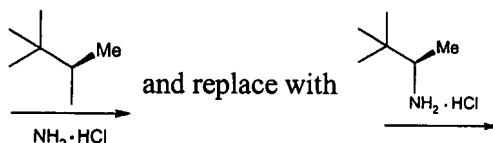
UNITED STATES PATENT AND TRADEMARK OFFICE
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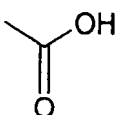
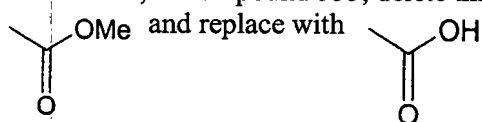
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 86,
Lines 21-45, delete



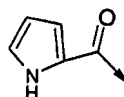
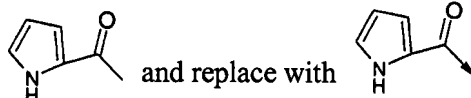
Column 87,

Lines 45-50, in compound 333, delete that right-hand part of the structure reading



Column 141,

Lines 25-30, delete



Column 142,

Line 50, delete "C₁₄ alkyl" and insert -- C₁₋₈ alkyl --.

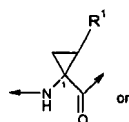
Line 61, delete "C₁₆ alkyl" and insert -- C₁₋₆ alkyl --.

Column 143,

Lines 45 and 46, delete "amino optionally substituted with C₁₋₆ alkyl,".

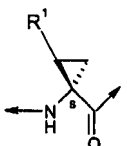
Column 149,

Line 30, delete

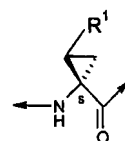


or

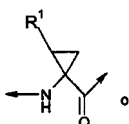
Line 35, delete the second structure



and replace with



Line 55, delete



or

Column 150,

Lines 2 and 15, delete the substituent "R₁" and replace with -- R¹ --.

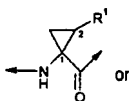
Line 12, after "carbonyl" insert -- are --.

Column 151,

Line 39, delete "RR₄" and replace with -- R₄ --.

Column 152,

Line 25, delete



or

Line 66, delete "C₃₋₇cycloalkyl," and replace with -- C₃₋₇ cycloalkyl, --.

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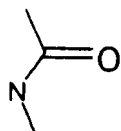
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 154,

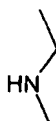
Lines 5-6, delete "is C₁₋₆" and replace with -- is C₁₋₆ --.

Column 163,

Lines 0-10, in the structure depicted underneath "R²" delete that part of the structure reading

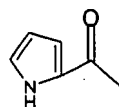


and replace with

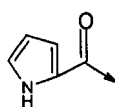


Column 187,

Lines 30-35, delete

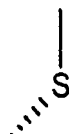


and replace with



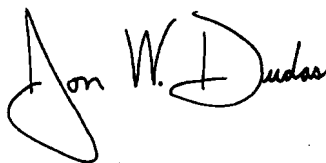
Column 188,

Lines 10-15, in the structure underneath "R²" delete that part of the structure reading:
and replace it with



Signed and Sealed this

Third Day of February, 2004



JON W. DUDAS
Acting Director of the United States Patent and Trademark Office